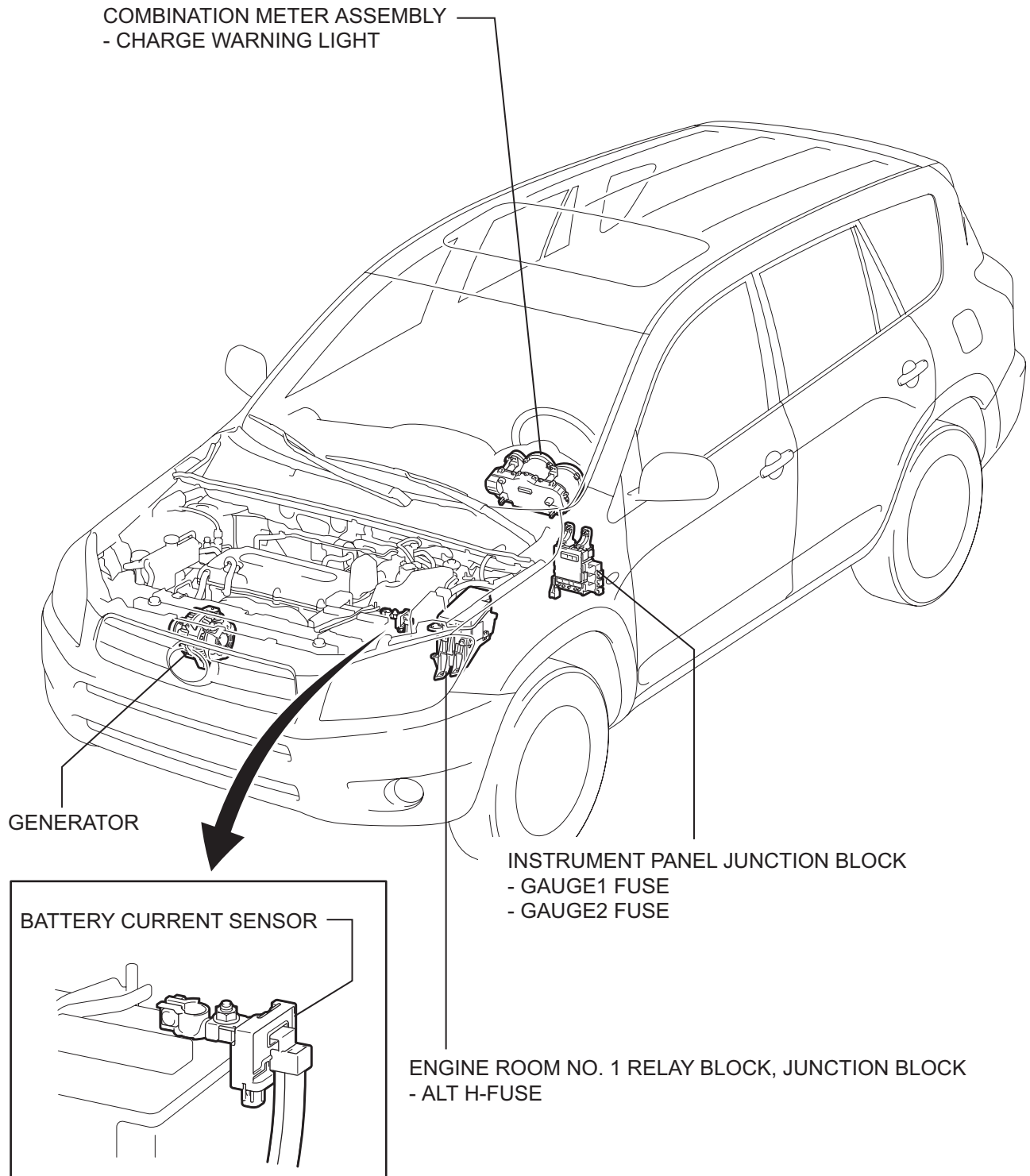


## CHARGING SYSTEM

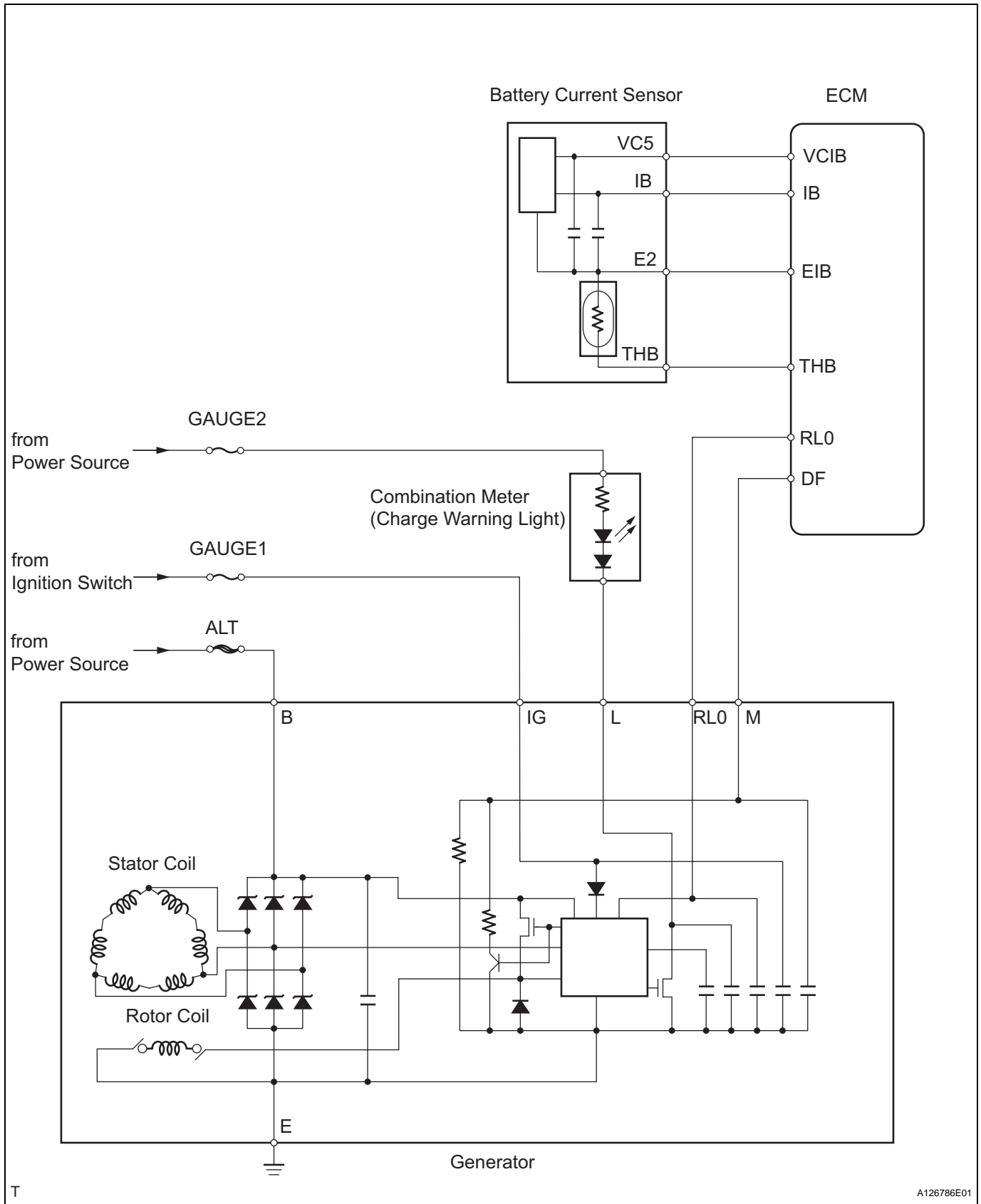
### PRECAUTION

1. Check that the battery cables are connected to the correct terminals.
2. Disconnect the battery cables if a quick charge is given to the battery.
3. Do not perform tests with a high voltage insulation resistance tester.
4. Never disconnect the battery while the engine is running.
5. Check that the charging cable is tightly connected onto terminal B of the generator and the fuse box.
6. Do not check whether the generator generates current or not while terminal F is connected to the other terminals.

## PARTS LOCATION



## SYSTEM DIAGRAM



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CH

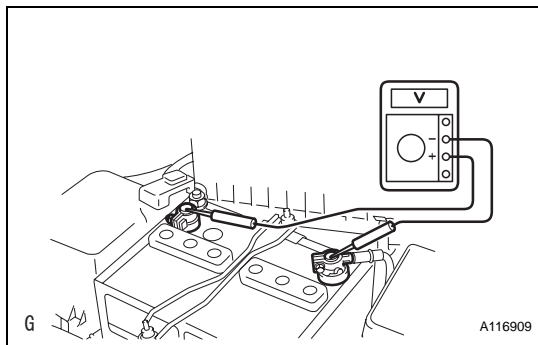
## ON-VEHICLE INSPECTION

### 1. CHECK BATTERY CONDITION

#### NOTICE:

**If the battery is weak or if the engine is difficult to start, perform the following procedures.**

- (a) Check the battery for damage and deformation. If severe damage, deformation or leakage is found, replace the battery.



- (b) Check the electrolyte quantity of each cell.

- (1) For maintenance-free batteries:

- If the electrolyte quantity is below the lower line, replace the battery.
- If the electrolyte quantity is above the lower line, check the battery voltage when cranking the engine. If the voltage is less than 9.6 V, recharge or replace the battery.

#### HINT:

Before checking the battery voltage, turn off all the electrical systems (headlights, blower motor, rear defogger, etc.).

- (2) For non-maintenance-free batteries:

- If the electrolyte quantity is below the lower line, add distilled water to each cell. Then, recharge the battery and check the electrolyte's specific gravity.

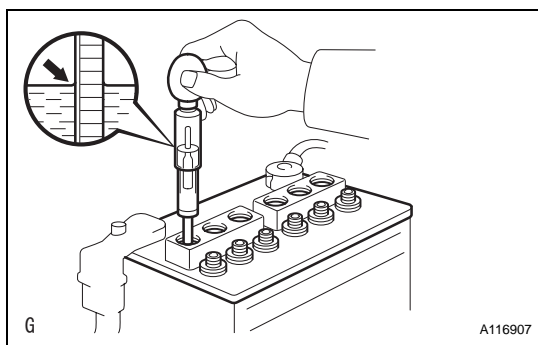
#### Standard specific gravity:

**1.25 to 1.29 at 20°C (68°F)**

If the electrolyte quantity is above the lower line, check the battery voltage when cranking the engine. If the voltage is less than 9.6 V, recharge or replace the battery.

#### HINT:

Before checking the battery voltage, turn off all the electrical systems (headlights, blower motor, rear defogger, etc.).



### 2. INSPECT BATTERY TERMINAL AND FUSE

- (a) Visually check the battery terminals.

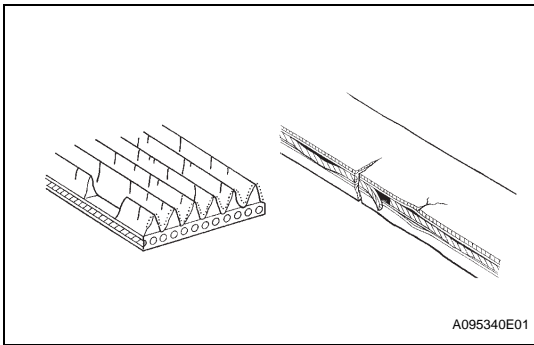
- (1) Check that the battery terminals are not loose or corroded.

- (b) Measure the resistance of the H-fuses and fuses.

#### Standard resistance:

**Below 1  $\Omega$**

If the results are not as specified, replace the fuses as necessary.



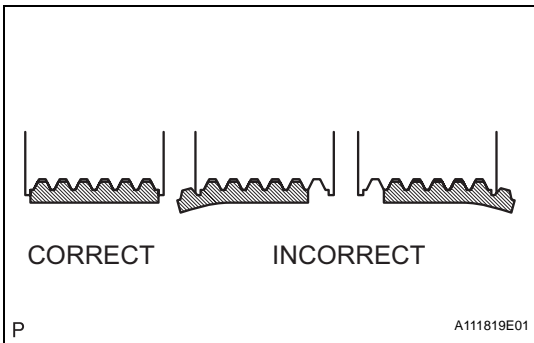
### 3. INSPECT V-RIBBED BELT

- (a) Visually check the belt for excessive wear, frayed cords, etc.

If any defects are found, replace the V-ribbed belt.

HINT:

Cracks on the rib side of the belt are considered acceptable. If the belt has chunks missing from the ribs, it should be replaced.



- (b) Check that the belt fits properly in the ribbed grooves.

HINT:

Confirm by hand that the belt has not slipped out of the grooves on the bottom of the pulley.

### 4. INSPECT GENERATOR WIRING

- (a) Visually check the generator wiring.

- (1) Check that the wiring is in good condition.

### 5. CHECK FOR ABNORMAL NOISES

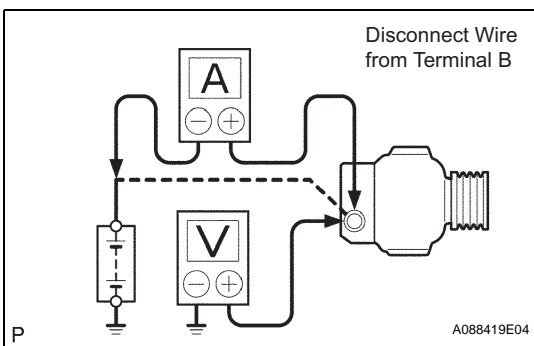
- (a) Listen for abnormal noises from the generator.

- (1) Check that no abnormal noises are heard from the generator while the engine is running.

### 6. INSPECT CHARGE WARNING LIGHT CIRCUIT

- (a) Turn the ignition switch ON. Check that the charge warning light comes on.

- (b) Start the engine and check that the light goes off. If the light does not operate as specified, troubleshoot the charge warning light circuit.



### 7. INSPECT CHARGING CIRCUIT WITHOUT LOAD

- (a) Connect a voltmeter and ammeter to the charging circuit as follows.

- (1) Disconnect the wire from terminal B of the generator, then connect it to the negative (-) lead of an ammeter.
- (2) Connect the positive (+) lead of the ammeter to terminal B of the generator.
- (3) Connect the positive (+) lead of a voltmeter to terminal B of the generator.
- (4) Ground the negative (-) lead of the voltmeter.

- (b) Check the charging circuit.

- (1) Keep the engine speed at 2,000 rpm and check the reading on the ammeter and voltmeter.

**Standard amperage:**

**10 A or less**

**Standard voltage:**

**12.1 to 15.4 V**

If the result is not as specified, replace the generator.

HINT:

If the battery is not fully charged, the ammeter reading will sometimes be more than the standard amperage.

**8. INSPECT CHARGING CIRCUIT WITH LOAD**

- (a) With the engine running at 2,000 rpm, turn the high beam headlights ON and turn the heater blower switch to the "HI" position.
- (b) Check the reading on the ammeter.

**Standard amperage:****30 A or more**

If the ammeter reading is less than the standard amperage, repair the generator.

**HINT:**

If the battery is fully charged, the indication will sometimes be less than the standard amperage. If this is the case, add more electrical load (operate the wipers, rear window defogger, etc.) and check the reading on the ammeter again.